```
=> S (DECONTAMINATION OR DETOXIFICATION OR STERILIZATION OR PURIFICATION
OR DISINFECTION OR REMEDIATION) AND (CHLORINE DIOXIDE)
        19019 DECONTAMINATION
           88 DECONTAMINATIONS
        19036 DECONTAMINATION
              (DECONTAMINATION OR DECONTAMINATIONS)
        23861 DETOXIFICATION
           38 DETOXIFICATIONS
        23880 DETOXIFICATION
              (DETOXIFICATION OR DETOXIFICATIONS)
        49328 STERILIZATION
           82 STERILIZATIONS
        49359 STERILIZATION
              (STERILIZATION OR STERILIZATIONS)
       369658 PURIFICATION
         1215 PURIFICATIONS
       370507 PURIFICATION
              (PURIFICATION OR PURIFICATIONS)
       335735 PURIFN
          239 PURIFNS
       335839 PURIFN
              (PURIFN OR PURIFNS)
       542710 PURIFICATION
              (PURIFICATION OR PURIFN)
        51601 DISINFECTION
          120 DISINFECTIONS
        51656 DISINFECTION
              (DISINFECTION OR DISINFECTIONS)
        33273 REMEDIATION
          239 REMEDIATIONS
        33361 REMEDIATION
              (REMEDIATION OR REMEDIATIONS)
       156051 CHLORINE
          881 CHLORINES
       156626 CHLORINE
              (CHLORINE OR CHLORINES)
       555774 DIOXIDE
         7057 DIOXIDES
       557591 DIOXIDE
              (DIOXIDE OR DIOXIDES)
         8866 CHLORINE DIOXIDE
              (CHLORINE(W)DIOXIDE)
L2       2571 (DECONTAMINATION OR DETOXIFICATION OR STERILIZATION OR
PURIFICAT
              ION OR DISINFECTION OR REMEDIATION) AND (CHLORINE DIOXIDE)

=> L2 AND HUMIDIFIER
L2 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> S L2 AND HUMIDIFIER
        2093 HUMIDIFIER
        1019 HUMIDIFIERS
        2468 HUMIDIFIER
              (HUMIDIFIER OR HUMIDIFIERS)
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L3 5 L2 AND HUMIDIFIER

=> DISPLAY L3 IBIB ABS KWIC 1-5

L3 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:542701 CAPLUS
DOCUMENT NUMBER: 145:10709
TITLE: Apparatus and method for producing chlorine dioxide
INVENTOR(S): Sanderson, William D.
PATENT ASSIGNEE(S): Sanderson, William, D., USA
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006060563	A2	20060608	WO 2005-US43455	20051202
WO 2006060563	A3	20060817		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

US 20050079124	A1	20050414	US 2004-2647	20041203
KR 2006063524	A	20060612	KR 2004-107775	20041217
EP 1838613	A2	20071003	EP 2005-826049	20051202

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR

PRIORITY APPLN. INFO.: US 2004-2647 A 20041203
US 2003-492729P P 20030806
WO 2004-US25201 A2 20040805
WO 2005-US43455 W 20051202

AB Provided are app. and methods for making chlorine dioxide on demand by converting a chlorine dioxide generating soln. into chlorine dioxide by exposure to UV-light.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Apparatus and method for producing chlorine dioxide
AB Provided are app. and methods for making chlorine dioxide on demand by converting a chlorine dioxide generating soln. into chlorine dioxide by exposure to UV-light.
ST app chlorine dioxide manuf air purifn
IT Air purification apparatus
Fans

UV radiation
Valves
(app. and method for producing chlorine dioxide)
IT Apparatus
(blowers; app. and method for producing chlorine dioxide)
IT Air purification
(disinfection; app. and method for producing chlorine dioxide)
IT Nozzles
(dispersion; app. and method for producing chlorine dioxide)
IT Cooling apparatus
(evaporative; app. and method for producing chlorine dioxide)
IT Air conditioners
(humidifiers; app. and method for producing chlorine dioxide)
IT Scrubbers
(vapor; app. and method for producing chlorine dioxide)
IT 7758-19-2, Sodium chlorite 7772-98-7, Sodium thiosulfate
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)
(app. and method for producing chlorine dioxide)
IT 10049-04-4P, Chlorine dioxide
RL: IMF (Industrial manufacture); PREP (Preparation)
(app. and method for producing chlorine dioxide)

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:486393 CAPLUS
DOCUMENT NUMBER: 144:494064
TITLE: Mixed oxidizing solution for air disinfection and humidification and ultrasonic humidifier using the solution
INVENTOR(S): Yamamura, Nobuo
PATENT ASSIGNEE(S): Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006130234	A	20060525	JP 2004-325371	20041109

PRIORITY APPLN. INFO.: JP 2004-325371 20041109
AB The mixed oxidizing soln. is obtained by mixing an aq. soln. contg. ClO2, ascorbic acid, and NaHCO3 with water while adjusting the amts. x (m3) .times. 10-3 of the soln., y (g) of ascorbic acid, and z (g) of NaHCO3 as follows: 2.5 .ltoreq. x .ltoreq. 4; 40 .ltoreq. y .ltoreq. 6.5; and 60 .ltoreq. z .ltoreq. 100 to 1 m3 of water. The ultrasonic humidifier is for evapg. the mixed oxidizing soln. by vibration and releasing the evapd. vapor of the soln. outside. While scarcely emitting malodor, the soln. is sprayed to air for air disinfection and deodorization.

TI Mixed oxidizing solution for air disinfection and humidification and ultrasonic humidifier using the solution
AB . . . .ltoreq. 4; 40 .ltoreq. y .ltoreq. 6.5; and 60 .ltoreq. z .ltoreq. 100 to 1 m3 of water. The ultrasonic humidifier is for evapg. the mixed oxidizing soln. by vibration and releasing the evapd. vapor of the soln. outside. While scarcely emitting malodor, the soln. is sprayed to air for air disinfection and deodorization.
ST air disinfection deodorization ultrasonic soln evapn; chlorine dioxide ascorbic acid soln evapn; ascorbic acid sodium carbonate soln evapn
IT Evaporation
(by ultrasonic vibration; oxidizing soln. and ultrasonic humidifier for air disinfection and deodorization using soln.)
IT Air purification
(deodorization; oxidizing soln. and ultrasonic humidifier for air disinfection and deodorization using soln.)
IT Air purification
(disinfection; oxidizing soln. and ultrasonic humidifier for air disinfection and deodorization using soln.)
IT Vibration
(ultrasonic; oxidizing soln. and ultrasonic humidifier for air disinfection and deodorization using soln.)
IT 74-93-1, Methylmercaptan, processes 7664-41-7, Ammonia, processes 7783-06-4, Hydrogen sulfide, processes
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(oxidizing soln. and ultrasonic humidifier for air disinfection and deodorization using soln.)
IT 50-81-7, Ascorbic acid, processes 144-55-8, Sodium hydrogen carbonate, processes 10049-04-4, Chlorine dioxide
RL: CPS (Chemical process); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(oxidizing soln. contg.; oxidizing soln. and ultrasonic humidifier for air disinfection and deodorization using soln.)

L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:718386 CAPLUS
DOCUMENT NUMBER: 141:209202
TITLE: Gas delivery apparatus and methods of use
INVENTOR(S): Warner, John J.; Hamilton, Richard A.; O'Neill, Gary A.
PATENT ASSIGNEE(S): Selective Micro Technologies, LLC, USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004073755	A1	20040902	WO 2004-US5194	20040220

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,
BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU,
MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 2003-449065P P 20030220
AB Disclosed are methods and app. that can be employed to initiate a plurality of individual gas generating reactions coterminously or sequentially. Generally, the invention provides an app. defining a plurality of reactant housings. A seal is disposed about the orifice of one or more reactant housings which can be disrupted to initiate the generation of gas by exposing reactant to an initiating agent. The process may be repeated as desired, so as to safely and conveniently generate desired concns. of gas at desired time intervals.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT Water purification
(app.; gas delivery app. and methods of use)
IT Delivery apparatus
Gases
Sterilization and Disinfection
(gas delivery app. and methods of use)
IT Air conditioners
(humidifiers; gas delivery app. and methods of use)
IT 7446-11-9, Sulfur trioxide, uses 10049-04-4, Chlorine dioxide
RL: BUU (Biological use, unclassified); NUU (Other use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(gas delivery app. and methods of use)

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:453063 CAPLUS
DOCUMENT NUMBER: 141:3825
TITLE: Remediating embedded microbial contaminants using a gas such as chlorine dioxide
INVENTOR(S): Hamilton, Richard A.; Warner, John J.; O'Neill, Gary A.
PATENT ASSIGNEE(S): Selective Micro Technologies, Llc, USA
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004045654	A2	20040603	WO 2003-US36212	20031114
WO 2004045654	A3	20040930		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003295499 A1 20040615 AU 2003-295499 20031114

PRIORITY APPLN. INFO.: US 2002-426630P P 20021114
US 2003-449245P P 20030220
WO 2003-US36212 W 20031114

AB Disclosed are methods and app. for remediating embedded microbiol. contaminants, e.g., mold, fungus, virus and bacteria, from hard surfaces, for example drywalls, plasters, stucco, car upholstery, carpets, etc. The method includes the step of exposing an embedded microbiol. contaminant to a gas, such as chlorine dioxide or ethylene gas, thereby remediating the microbiol. contaminant.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Remediating embedded microbial contaminants using a gas such as chlorine dioxide

AB . . . car upholstery, carpets, etc. The method includes the step of exposing an embedded microbiol. contaminant to a gas, such as chlorine dioxide or ethylene gas, thereby remediating the microbiol. contaminant.

ST gas surface microbial decontamination sterilization app

IT Sterilization and Disinfection
(app.; gases for remediating embedded microbial contaminants from hard surfaces)

IT Carpets
Decontamination
Eubacteria
Fungi
Mold (fungus)
Plaster
Spray atomizers
Spraying apparatus
Sterilization and Disinfection
Stucco
Surface
Surface treatment
Virus
(gases for remediating embedded microbial contaminants from hard surfaces)

IT Air conditioners
(humidifiers; gases for remediating embedded microbial contaminants from hard surfaces)

IT 74-85-1, Ethylene, biological studies 75-21-8, Ethylene oxide, biological studies 7446-09-5, Sulfur dioxide, biological studies 10049-04-4, Chlorine dioxide
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(gases for remediating embedded microbial contaminants from hard surfaces)

L3 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:491076 CAPLUS

DOCUMENT NUMBER: 139:54696

TITLE: Apparatus and method for controlled delivery of a gas

INVENTOR(S): Hamilton, Richard Alexander; Warner, John J.
PATENT ASSIGNEE(S): Selective Micro Technologies, LLC, USA
SOURCE: PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003051406	A1	20030626	WO 2002-US40301	20021217
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 20040022676	A1	20040205	US 2002-225769	20020822
CA 2470434	A1	20030626	CA 2002-2470434	20021217
AU 2002357278	A1	20030630	AU 2002-357278	20021217
EP 1467774	A1	20041020	EP 2002-805178	20021217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002015019	A	20050510	BR 2002-15019	20021217
JP 2005512769	T	20050512	JP 2003-552338	20021217
CN 1627963	A	20050615	CN 2002-828165	20021217
MX 2004005961	A	20041101	MX 2004-5961	20040617
AU 2006200542	A1	20060302	AU 2006-200542	20060208

PRIORITY APPLN. INFO.: US 2001-341429P P 20011217
US 2002-225769 A 20020822
US 2000-183368P P 20000218
US 2000-183638P P 20000218
US 2000-190028P P 20000317
US 2000-660117 A2 20000912
US 2001-259896P P 20010104
AU 2001-43167 A3 20010216
US 2001-785634 A2 20010216
WO 2002-US40301 W 20021217

AB Disclosed are app. for delivery of a gas, e.g., carbon dioxide and/or chlorine dioxide, and methods of its use and manuf. The app. includes a sachet constructed in part with a hydrophobic material. The sachet contains one or more reactants that generate a gas in the presence of an initiating agent, e.g., water. The app. can also include a barrier layer and/or a rigid frame. In another embodiment, the app. is combined with a reservoir that can be used to deliver a gas to the reservoir and, optionally, a conduit. In another embodiment, the app. is incorporated into a fluid dispersion system that includes a dispersion app., e.g., a humidifier.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Disclosed are app. for delivery of a gas, e.g., carbon dioxide and/or chlorine dioxide, and methods of its use and manuf. The

app. includes a sachet constructed in part with a hydrophobic material. The. . . conduit. In another embodiment, the app. is incorporated into a fluid dispersion system that includes a dispersion app., e.g., a humidifier.

IT Bottles
Delivery apparatus
Materials handling
Medical goods
Water purification
(app. and method for controlled delivery of gas)

IT Air purification
(deodorization; app. and method for controlled delivery of gas)

IT Air conditioners
(humidifiers; app. and method for controlled delivery of gas)

IT 124-38-9P, Carbon dioxide, uses 10049-04-4P, Chlorine dioxide
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(app. and method for controlled delivery of gas)